

Application No. 10/627,222
Amendment dated September 6, 2005
Reply to Office Action of May 3, 2005

REMARKS/ARGUMENTS

Responsive to the Official Action mailed May 3, 2005, applicants have further revised the claims of their application in an earnest effort to place this case in condition for allowance. Specifically, claim 5 has been canceled, independent claim 1 amended, and dependent claims 6 and 7 revised and amended to depend from amended claim 1. Reconsideration is respectfully requested.

In the Action, the Examiner rejected the pending claims under 35 U.S.C. §112, noting language in claim 1 considered to be indefinite. By this response, applicants have revised claim 1 to specify that the recited hydroentangling *steps* are effected prior to thermal-bonding of thermoplastic fusible fibers provided in the fibrous matrix from which their durable, nonwoven fabric is formed. Additionally, claim 5 has been canceled, and claims 6 and 7 amended to depend from claim 1. It is believed that this rejection can now be withdrawn.

In the Action, the Examiner has rejected the pending claims under 35 U.S.C. §103, with reliance upon U.S. Patent No. 5,414,914, to Suzuki et al., in view of U.S. Patent No. 5,240,740, to Haid et al., U.S. Patent No. 5,552,206, to Knoke et al., and U.S. Patent No. 5,822,833, to James et al. However, it is respectfully maintained that even when combined, these references simply do not teach or suggest applicants' novel method for forming a highly durable, hydroentangled nonwoven fabric, and accordingly, the Examiner's rejection is respectfully traversed.

As discussed in the Specification, applicants' invention contemplates a novel method for forming a highly durable, nonwoven fabric, wherein a fibrous matrix of thermoplastic fusible fibers and base fibers is consolidated by hydroentanglement, and imparted with an image by

hydroentanglement, wherein the image is subsequently "fixed" by elevating the temperature of the product, thereby activating the fusible fibers.

Notably, applicants' method further specifies *jet-dyeing the nonwoven fabric subsequent to the step of elevating the temperature* of the fabric. Clearly, there is no teaching or suggestion in any of the cited art of this further process step, further differentiating the present claims from the combined teachings of the prior art.

In the Action, the Examiner principally relies upon the Suzuki et al. reference, but the Examiner specifically acknowledges the deficiencies in the teachings of the principal Suzuki et al. reference in stating "the support member does not appear to be a 3-D image transfer device such that a 3-D image is transferred to the web during a primary hydroentangling operation".

Thus, the Examiner acknowledges that the principal prior art reference fails to teach or suggest this fundamental aspect of applicants' claimed process.

Significantly, the Suzuki et al. patent is the *fifth* different principal reference cited by the Examiner during prosecution of this application, and applicants' parent case, and the *ninth* different prior art reference relied upon by the Examiner in formulating rejections under 35 U.S.C. §103. Given the somewhat protracted prosecution of this application and its parent case, this relatively large assortment of diverse prior art references, which have been combined with shifting reliance on a variety of principal references, certainly suggests that *the references themselves do not teach or suggest applicants' admittedly novel method*.

The Suzuki et al. patent contemplates the use of a perforated metallic plate, with the stated object of the disclosure reading as follows:

An object of the present invention is to provide a process for producing apertured nonwoven fabric having clearly contoured apertures by distributing aside fibers laying on a plurality of projections regularly carried on support means toward surface portions defined between said projections (column 2, lines 21 *et seq.*).

In other words, the principal thrust of the Suzuki et al. patent, by its own disclosure, is the formation of an *apertured fabric*, with no teaching or suggestion of forming three-dimensional images, in accordance with the presently pending claims.

In this regard, the Examiner relies upon the secondary James et al. patent. While the type of apparatus disclosed in James et al. can be employed for practicing the present invention, it is respectfully noted that James et al. simply does not teach or suggest the recited steps of applicants' process, including the provision of a fibrous matrix as claimed, with elevation of the temperature of the imaged nonwoven fabric, followed by jet-dyeing of the fabric.

In the Action, the Examiner further acknowledges the deficiencies in the principal Suzuki et al. patent in noting that "Suzuki et al. does not teach using a blend of thermal-fusible base fibers in forming a fibrous web, and heat-activating the heat-fusible fibers in a hydroentangled web.

Thus, this further principal reference relied upon by the Examiner during prosecution of this application, and applicants' parent application, is admittedly deficient in teaching or suggesting two specifically recited aspects of applicants' novel process.

Applicants have never contended that individual steps of their process might not be known from the prior art, but instead, have emphasized the *unique combination of steps* by which a highly durable nonwoven fabric can be formed. Significantly, such durability is evidenced by reciting the *jet-dyeing step* of applicants' process, which, as set forth in the

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Specification, has been found to provide the desired durability after repeated home launderings, as per test protocol ATCC124-1996. As noted at page 11 of the Specification, "no application of chemical binders was required to obtain the positive results".

At column 6, line 18 *et seq.*, of Suzuki et al., it is stated:

Thus, the present invention permits the formation of apertures to be clearly contoured and the fiber entanglement to be sufficiently achieved even under water streams of relatively low pressure and thereby makes it possible to produce the apertured nonwoven fabric 12 of good fiber rearrangement and desired strength *at a low cost*.

Clearly, the thrust of the principal Suzuki et al. patent, as noted above, is *low cost formation*. As such, this principal reference *teaches away from* the modifications suggested by the Examiner in the Action. There is, *no suggestion* in Suzuki et al. of employing a three-dimensional image transfer device, such as disclosed in James et al.; Suzuki et al. is principally concerned with employing a *low cost* forming surface. Additionally, there would be *no motivation* in Suzuki et al. to modify its teachings in accordance with the Haid et al. patent, since again, use of relatively expensive fusible fibers would be contrary to the teachings of Suzuki et al. seeking *low cost formation*.

There is, of course, no teaching or suggestion in Suzuki et al. of performing the recited *jet-dyeing step* of applicants' process, no doubt because the fabric of Suzuki would not exhibit sufficient durability as to permit the fabric to perform acceptably when subjected to jet-dyeing.

Applicants note the Examiner's reference to the Knoke et al. patent, but again, it is respectfully maintained that modifying the teachings of the principal Suzuki et al. patent in accordance with Knoke et al. would be *contrary to* the thrust of the Suzuki et al. patent, that is,

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low cost formation. Additionally, it should be noted that in the very next sentence of Knoke et al., after the portion of this patent referenced by the Examiner, Knoke et al. states:

Alternatively, strengthening binding agents are also useable.

Clearly, this aspect of Knoke et al. *teaches away from* applicants' claimed process, wherein the use of binding agents is specifically avoided.

In the Action, the Examiner further acknowledges the deficiencies in the teachings of the principal Suzuki et al. patent in teaching or suggesting applicants' claimed fiber composition. Again, applicants must respectfully disagree that the *references themselves* teach or suggest combining their diverse teachings. Reference is respectfully made to M.P.E.P. Section 2143.01, which specifically admonishes that "the prior art must suggest the desirability of the claimed invention" (citations omitted), and goes on to caution that the "fact that references can be combined or modified is not sufficient to establish *prime facie* obviousness" (citations omitted). Additionally, as specifically noted in M.P.E.P. Section 2141.02, "the prior art must be considered in its entirety, including disclosures that teach away from the claims" (citations omitted). This requirement of the M.P.E.P. is believed to be particularly germane to the subject application, since the Examiner has selected among diverse, and in some cases *contradictory* teachings of the prior art references in formulating the rejection under 35 U.S.C. §103. Under such circumstances, it is respectfully maintained that a rejection under 35 U.S.C. §103 should not be maintained.

In view of the foregoing, formal allowance of claims 1-4 and 6-9 is believed to be in order and is respectfully solicited. Should the Examiner wish to speak with applicants' attorneys, they may be reached at the number indicated below.

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The Commissioner is hereby authorized to charge any additional fees which may be required in connection with this submission to Deposit Account No. 23-0785.

Respectfully submitted,

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CERTIFICATE OF MAILING

I hereby certify that this paper is being deposited with the United States Postal Service with sufficient postage at First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450 on **September 6, 2005**.

